

AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

Claims 1-3 (cancel)

4. (new) An add-drop multiplexer with signal amplification ability comprising:

a first optical coupler, of a grating built-in type, having an input port, a through port, a forward coupled port, and a reverse coupled port;

a first optical amplifier having an input port for receiving a signal and an output port connected to the input port of the first optical coupler;

a second optical coupler, of a grating built-in type, having an input port, a through port not connected to the through port of the first optical coupler, a forward coupled port connected to the forward coupled port of the first optical coupler, and a reverse coupled port connected to the reverse coupled port of the first optical coupler; and

a second optical amplifier having an output, and an input connected to the input port of the second optical coupler wherein a Bragg wavelength₁ output by the reverse coupled port of the first optical coupler and input to the reverse coupled

port of the second optical coupler, is outputted by the input port of the second optical coupler and amplified and outputted by the second optical amplifier.

5. (new) The add-drop multiplexer of claim 4, wherein the first and second optical couplers each include a fiber coupler formed with a fiber grating at a melt-extended portion of the fiber coupler, a pitch of the fiber grating has an uniform structure in a length direction, apodization is done, and the fiber grating has a length of 2.0 mm and a change in induced refractive index is 0.001.

6. (new) The add-drop multiplexer of claim 5, further comprising a switch connecting the reverse coupled port of the second optical coupler to the reverse coupled port of the first optical coupler.

7. (new) The add-drop multiplexer of claim 6, wherein the first and second optical couplers have a same Bragg wavelength.

8. (new) The add-drop multiplexer of claim 5, wherein the first and second optical couplers have a same Bragg wavelength.

9. (new) The add-drop multiplexer of claim 4, further comprising a switch connecting the reverse coupled port of the second optical coupler to the reverse coupled port of the first optical coupler.

10. (new) The add-drop multiplexer of claim 9, wherein the first and second optical couplers have a same Bragg wavelength.

11. (new) The add-drop multiplexer of claim 4, wherein the first and second optical couplers have a same Bragg wavelength.